

THAT WHICH IS CLAIMED IS:

1. A communications system comprising:
a plurality of data storage devices each
using at least one of a plurality of different
operating protocols;
a plurality of mobile wireless communications
devices for accessing said data storage devices and
each using at least one of the plurality of different
operating protocols; and
a protocol interface device comprising
a front-end proxy module for
communicating with said plurality of mobile
wireless communications devices using
respective operating protocols, and
a protocol engine module for
communicating with said plurality of data
storage devices using respective operating
protocols,
said front-end proxy module and said
protocol engine module communicating using a
common interface protocol able to represent a
desired number of protocol-supported elements
for a desired operating protocol.
2. The communications system of Claim 1
wherein said plurality of data storage devices, said
plurality of mobile wireless communications devices,
and said protocol interface device process electronic
mail (e-mail) messages.
3. The communications system of Claim 1
wherein the common interface protocol is able to

represent all protocol-supported elements for a most capable operating protocol.

4. The communications system of Claim 3 wherein the most capable protocol comprises Outlook Web Access (OWA).

5. The communications system of Claim 1 wherein the common interface protocol is based upon a Web-based distributed authoring and versioning (WebDAV) protocol.

6. The communications system of Claim 1 wherein said mobile wireless communications devices send access requests; and wherein said data storage devices send data responsive to access requests.

7. The communications system of Claim 6 wherein the access requests comprise at least one authentication request.

8. The communications system of Claim 7 wherein the at least one authentication request comprises a user identifier and a user password.

9. The communications system of Claim 7 wherein at least one of said data storage devices is for electronic mail (e-mail) messages; and wherein said at least one storage device responds to the at least one authentication request with a root folder and target e-mailbox capabilities.

10. The communications system of Claim 1 wherein said protocol interface device generates an error responsive to at least one non-supported operating protocol.

11. The communications system of Claim 1 further comprising a wide area network (WAN) connecting at least one of said mobile wireless communications devices with said protocol interface device.

12. The communications system of Claim 1 further comprising a wide area network (WAN) connecting at least one of said data storage devices with said protocol interface device.

13. A protocol interface device for interfacing a plurality of mobile wireless communications devices with a plurality of data storage devices, the mobile wireless communications devices and data storage devices each using at least one of a plurality of different operating protocols, the protocol interface device comprising:

a front-end proxy module for communicating with the plurality of mobile wireless communications devices using respective operating protocols; and

a protocol engine module for communicating with the plurality of data storage devices using respective operating protocols;

said front-end proxy module and said protocol engine module communicating using a common interface protocol able to represent a desired number of protocol-supported elements for a desired operating protocol.

14. The protocol interface device of Claim 13 wherein the plurality of data storage devices, the plurality of mobile wireless communications devices, said front-end proxy module, and said protocol engine module process electronic mail (e-mail) messages.

15. The protocol interface device of Claim 13 wherein the common interface protocol is able to represent all protocol-supported elements for a most capable operating protocol.

16. The protocol interface device of Claim 13 wherein the common interface protocol is based upon a Web-based distributed authoring and versioning (WebDAV) protocol.

17. A protocol interface device for interfacing a plurality of communications devices with a plurality of data storage devices, the communications devices and data storage devices each using at least one of a plurality of different operating protocols, the protocol interface device comprising:

- a front-end proxy module for communicating with the plurality of communications devices using respective operating protocols; and

- a protocol engine module for communicating with the plurality of data storage devices using respective operating protocols;

- said front-end proxy module and said protocol engine module communicating using a common interface protocol able to represent a desired number of

protocol-supported elements for a desired operating protocol.

18. The protocol interface device of Claim 17 wherein the plurality of data storage devices, the plurality of communications devices, said front-end proxy module, and said protocol engine module process electronic mail (e-mail) messages.

19. The protocol interface device of Claim 17 wherein the common interface protocol is able to represent all protocol-supported elements for a most capable operating protocol.

20. The protocol interface device of Claim 17 wherein the common interface protocol is based upon a Web-based distributed authoring and versioning (WebDAV) protocol.

21. A method for interfacing a plurality of mobile wireless communications devices with a plurality of data storage devices, the mobile wireless communications devices and data storage devices each using at least one of a plurality of different operating protocols, the method comprising:

providing a front-end proxy module for communicating with the plurality of mobile wireless communications devices using respective operating protocols;

providing a protocol engine module for communicating with the plurality of data storage devices using respective operating protocols; and

causing the front-end proxy module and the protocol engine module to communicate using a common interface protocol able to represent a desired number of protocol-supported elements for a desired operating protocol.

22. The method of Claim 21 wherein the plurality of data storage devices, the plurality of mobile wireless communications devices, the front-end proxy module, and the protocol engine module process electronic mail (e-mail) messages.

23. The method of Claim 21 wherein the common interface protocol is able to represent all protocol-supported elements for a most capable operating protocol.

24. The method of Claim 21 wherein the common interface protocol is based upon a Web-based distributed authoring and versioning (WebDAV) protocol.

25. A computer-readable medium having computer-executable modules for interfacing a plurality of mobile wireless communications devices with a plurality of data storage devices, the mobile wireless communications devices and data storage devices each using at least one of a plurality of different operating protocols, the computer-readable medium comprising:

a front-end proxy module for communicating with the plurality of mobile wireless communications devices using respective operating protocols; and

a protocol engine module for communicating with the plurality of data storage devices using respective operating protocols, the front-end proxy module and the protocol engine module communicating using a common interface protocol able to represent a desired number of protocol-supported elements for a desired operating protocol.

26. The computer-readable medium of Claim 25 wherein the plurality of data storage devices, the plurality of mobile wireless communications devices, the front-end proxy module, and the protocol engine module process electronic mail (e-mail) messages.

27. The computer-readable medium of Claim 25 wherein the common interface protocol is able to represent all protocol-supported elements for a most capable operating protocol.

28. The computer-readable medium of Claim 25 wherein the common interface protocol is based upon a Web-based distributed authoring and versioning (WebDAV) protocol.